

*What Is Claimed Is:*

1. An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a member selected from the group consisting of:

(a) a nucleotide sequence encoding the t-PALP polypeptide having the amino acid sequence at positions -21 to 242 of SEQ ID NO:2, or the complete amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209023;

(b) a nucleotide sequence encoding the t-PALP polypeptide having the amino acid sequence at positions -20 to 242 of SEQ ID NO:2, or the complete amino acid sequence excepting the N-terminal methionine encoded by the cDNA clone contained in ATCC Deposit No. 209023;

(c) a nucleotide sequence encoding the mature t-PALP polypeptide having the amino acid sequence at positions 1 to 242 of SEQ ID NO:2, or as encoded by the cDNA clone contained in ATCC Deposit No. 209023;

(d) a nucleotide sequence encoding the kringle domain of the t-PALP polypeptide having the amino acid sequence at positions 4 to 63 of SEQ ID NO:2, or as encoded by the cDNA clone contained in ATCC Deposit No. 209023;

(e) a nucleotide sequence encoding the protease domain of the t-PALP polypeptide having the amino acid sequence at positions 64 to 242 of SEQ ID NO:2, or as encoded by the cDNA clone contained in ATCC Deposit No. 209023;

(f) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c), (d) or (e) above.

2. The nucleic acid molecule of claim 1 wherein said polynucleotide has the complete nucleotide sequence in Figure 1 (SEQ ID NO:1).

3. The nucleic acid molecule of claim 1 wherein said polynucleotide has the nucleotide sequence in Figure 1 (SEQ ID NO:1) encoding the t-PALP polypeptide having the amino acid sequence of positions -20 to 242 of SEQ ID NO:2.

4. The nucleic acid molecule of claim 1 wherein said polynucleotide has the nucleotide sequence in Figure 1 (SEQ ID NO:1) encoding the mature t-PALP polypeptide having the amino acid sequence at positions 1 to 242 in SEQ ID NO:2.

5. An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a member selected from the group consisting of:

(a) a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of residues n to 242 of SEQ ID NO:2, where n is an integer in the range of -20 to 64;

(b) a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of residues -20 to m of SEQ ID NO:2, where m is an integer in the range of 230 to 241;

(c) a nucleotide sequence encoding a polypeptide having the amino acid sequence consisting of residues n to m of SEQ ID NO:2, where n and m are integers as defined respectively in (a) and (b) above; and

(d) a nucleotide sequence encoding a polypeptide consisting of a portion of the complete t-PALP amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209023 wherein said portion excludes from 1 to about 63 amino acids from the amino terminus;

(e) a nucleotide sequence encoding a polypeptide consisting of a portion of the complete t-PALP amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209023 wherein said portion excludes from 1 to about 11 amino acids from the carboxy terminus; and

(f) a nucleotide sequence encoding a polypeptide consisting of a portion of the complete t-PALP amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209023 wherein said portion includes a combination of any of the amino terminal and carboxy terminal deletions in (d) and (e), above.

6. The nucleic acid molecule of claim 1 wherein said polynucleotide has the complete nucleotide sequence of the cDNA clone contained in ATCC Deposit No. 209023.

7. The nucleic acid molecule of claim 1 wherein said polynucleotide has the nucleotide sequence encoding the t-PALP polypeptide having the complete amino acid sequence excepting the N-terminal methionine encoded by the cDNA clone contained in ATCC Deposit No. 209023.

8. The nucleic acid molecule of claim 1 wherein said polynucleotide has the nucleotide sequence encoding the mature t-PALP polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209023.

9. An isolated nucleic acid molecule comprising a polynucleotide which hybridizes under stringent hybridization conditions to a polynucleotide having a nucleotide sequence identical to a nucleotide sequence in (a), (b), (c), (d) or (e) of claim 1 wherein said polynucleotide which hybridizes does not hybridize under stringent hybridization conditions to a polynucleotide having a nucleotide sequence consisting of only A residues or of only T residues.

10. An isolated nucleic acid molecule comprising a polynucleotide which encodes the amino acid sequence of an epitope-bearing portion of a t-PALP polypeptide having an amino acid sequence in (a), (b), (c) or (d) of claim 1.

11. The isolated nucleic acid molecule of claim 10, which encodes an epitope-bearing portion of a t-PALP polypeptide wherein the amino acid sequence of said portion is selected from the group of sequences in SEQ ID NO:2 consisting of: about Ser-1 to about His-10 in SEQ ID NO:2; about Glu-14 to about Leu-23 in SEQ ID NO:2; about Arg-50 to about Trp-60 in SEQ ID NO:2; about Pro-70 to about Gln-86 in SEQ ID NO:2; about Ala-98 to about Val-107 in SEQ ID NO:2; about Leu-117 to about Gln-126 in SEQ ID NO:2; about Arg-134 to about Gly-146 in SEQ ID NO:2; about Ser-172 to about Gln-182 in SEQ ID NO:2; about Gln-185 to about Arg-194 in SEQ ID NO:2; about Thr-206 to about Val-216 in SEQ ID NO:2; and about Thr-222 to about Thr-231 in SEQ ID NO:2.

12. A method of making a recombinant vector comprising inserting an isolated nucleic acid molecule of claim 1 into a vector.

13. A recombinant vector produced by the method of claim 12.

14. A method of making a recombinant host cell comprising operably linking the nucleic acid molecule of claim 1 to a foreign expression control element.

15. A recombinant host cell produced by the method of claim 14.

16. A recombinant method for producing a t-PALP polypeptide, comprising culturing the recombinant host cell of claim 15 under conditions such that said polypeptide is expressed and recovering said polypeptide.

17. An isolated t-PALP polypeptide comprising an amino acid sequence at least 95% identical to a member selected from the group consisting of:

(a) the amino acid sequence at positions -20 to 242 of SEQ ID NO:2, or the complete t-PALP amino acid sequence excepting the N-terminal methionine encoded by the cDNA clone contained in ATCC Deposit No. 209023;

(b) the amino acid sequence of the mature form of the t-PALP polypeptide having the amino acid sequence at positions 1 to 242 of SEQ ID NO:2, or as encoded by the cDNA clone contained in the ATCC Deposit No. 209023;

(c) the amino acid sequence of the kringle domain of the t-PALP polypeptide having the amino acid sequence at positions 4 to 63 of SEQ ID NO:2, or as encoded by the cDNA clone contained in the ATCC Deposit No. 209023; and

(d) the amino acid sequence of the mature t-PALP polypeptide having the amino acid sequence at positions 64 to 242 of SEQ ID NO:2, or as encoded by the cDNA clone contained in the ATCC Deposit No. 209023; and

(e) the amino acid sequence of an epitope-bearing portion t-PALP.

18. The isolated polypeptide of claim 17 comprising an epitope-bearing portion of the t-PALP protein, wherein said portion is selected from the group consisting of: a polypeptide comprising amino acid residues from about Ser-1 to about His-10 in SEQ ID NO:2; about Glu-14 to about Leu-23 in SEQ ID NO:2; about Arg-50 to about Trp-60 in SEQ ID NO:2; about Pro-70 to about Gln-86 in SEQ ID NO:2; about Ala-98 to about Val-107 in SEQ ID NO:2; about Leu-117 to about Gln-126 in SEQ ID NO:2; about Arg-134 to about Gly-146 in SEQ ID NO:2; about Ser-172 to about Gln-182 in SEQ ID NO:2; about Gln-185 to about Arg-194 in SEQ ID NO:2; about Thr-206 to about Val-216 in SEQ ID NO:2; and about Thr-222 to about Thr-231 in SEQ ID NO:2.

19. An isolated antibody that binds specifically to a t-PALP polypeptide of claim 17.

20. An isolated nucleic acid molecule comprising a polynucleotide having a sequence at least 95% identical to a sequence selected from the group consisting of:

(a) the nucleotide sequence of a portion of the sequence shown in Figure 1 (SEQ ID NO:1) wherein said portion comprises at least 50 contiguous nucleotides from 1 to 110 or from 630 to 750;

(b) the nucleotide sequence of a portion of the sequence shown in Figure 1 (SEQ ID NO:1) wherein said portion consists of nucleotides 1 to 2000, 1 to 1500, 1 to 1000, 1 to 500, 1 to 250, 250 to 2000, 250 to 1500, 250 to 1000, 250 to 500, 500 to 2000, 500 to 1500, 500 to 1000, 1000 to 2000, or 1000 to 1500; and

(c) a nucleotide sequence complementary to any of the nucleotide sequences in (a) or (b) above.

Add B<sup>1</sup>

Add E<sup>2</sup>